

# LITHOLOGIC LOG

Page 1 of 6

## LOCATION MAP:

BLM-15-305 •

BW-5-295 •

BW-7-211 •

BW-1-268 •

NORTH

BLM-13-300 •

•BW-3-180

WELL ROAD

NW 1/4 NW 1/4 NE 1/4 SW 1/4 S 34 T 20 R E

SITE ID: NASA-WSTF

LOCATION ID: BLM-15-305

SITE COORDINATES (ft.):

N 229884.04

E 410430.31

GROUND ELEVATION (ft. MSL):

4703.69

STATE: NEW MEXICO

COUNTY: DOÑA ANA

DRILLING METHOD: Mud/Air-Foam Rotary

DRILLING CONTR.: Larjon

DATE STARTED: 30 March 1989

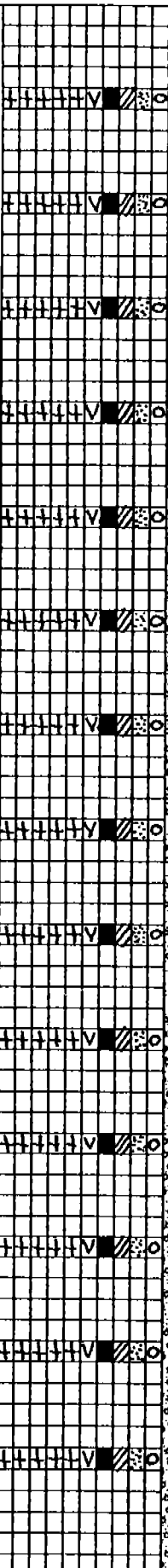


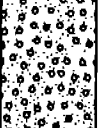








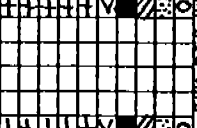

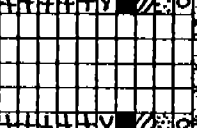


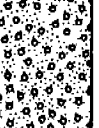
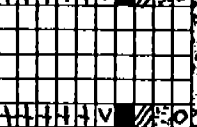

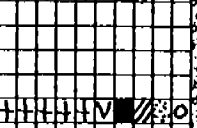





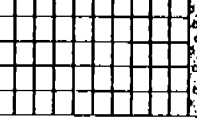

DATE COMPLETED: 14 April 1989

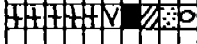

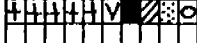
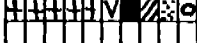


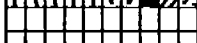

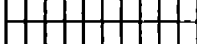

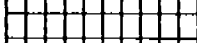
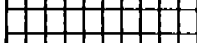



FIELD REP.: Contalado/Egan/Werden






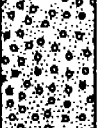

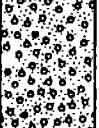

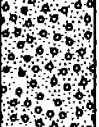



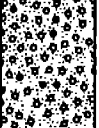

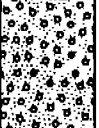


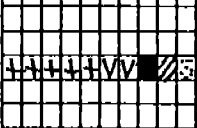
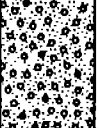

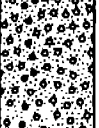






COMMENTS: Mud Rotary 0-290', 12 1/4"; Air-Foam 290'-325',  
7 7/8"; bedrock encountered at 256'; total depth = 325'.

LOCATION DESCRIPTION: Off-site within axis of contamination plume.

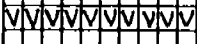









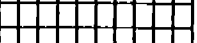
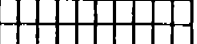


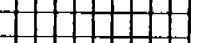
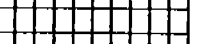
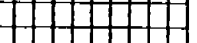
Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
5	VV=//o		(First 290' of borehole timed by field reps.	0'-325' cuttings	0-256' Alluvium (Santa Fe Group): Grayish orange pink (10 R 8/2 - moist) to grayish black (N2 - moist); cuttings range in size from less than 0.5 mm to 1.5 cm; angular to subrounded; poorly to moderately sorted. Unconsolidated to slightly consolidated, polygenetic, pebble to boulder conglomerate including clay, silt, and sand. Lithologies include micritic limestone (medium light gray (N6) to grayish black (N2)), rhyolite, siltstone, andesite, quartz- ite, granite, calcite, chert, and caliche (primarily as grain coatings).
10	VV=//o				0-30' High (10-25%) clay content, relatively large average cutting size (7 mm).
15	VV=//o				30'-256' Lower clay content (<10%) and decrease in average cutting size (3 mm). Sandstone cuttings present.
20	VV=//o		100		
25	VV=//o				
30	VV=//o				
35	VV=//o				
40	VV=//o		50		
45	VV=//o				
50	VV=//o		60		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
50			60		
55					
60					
65					
70			180		70'-75' Drill stem rattling through a boulder. A large amount of grey cherty limestone cuttings, relative to micritic limestone cuttings, is present.
75					
80			115		
85					
90			115		
95					
100					
105					
110			100		
115					

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
115			65		
120					
125					
130					
135					
140			180		140'-256' Caliche grain coatings rare to absent.
145					145' Drill stem rattling through a boulder. No noticeable changes in lithology of limestone cuttings.
150					
155					
160					
165			145		
170					
175					
180			85		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
180			85		
185					
190			90		
195					
200			75		
205					
210			105		
215					215'-256' Igneous cuttings (primarily andesite with some rhyolite) more abundant (20-30%) indicating clastic influx from volcanic source terrain.
220			80		
225					
230					
235					
240			200		
245					

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
245					
250			195		
255					256'-283' <u>Weathered Rhyolite Tuff</u> : White (N9) to yellowish gray (5 Y 7/2) saturated clay flocculated within drilling mud. Cuttings are actually individual flocs which are rounded and very soft (mushy). Clay represents secondary alteration of rhyolitic tuff to montmorillinite or illite clay.
260			115		
265					
270			50		
275					
280					283'-290' <u>Weathered Rhyolite Tuff</u> : White (N9) to moderate red (5R 5/4) saturated ferruginous clay flocculated within drilling mud. White to yellowish gray flocs grade downward into more reddish flocs with depth. Color change relative to overlying unit probably reflects weathered rhyolite tuff containing a greater percentage of iron-bearing minerals. Texture and hardness same as above clay.
285					
290			Begin Drilllograph		
295			15		290'-325' <u>Rhyolitic Lapilli Tuff</u> : Pale yellowish orange (10 YR 8/6 - Dry) rhyolitic lapilli tuff displaying eutaxitic structure within a fine-grained ground mass. Alteration halos around lapilli and liesegang banding are post-depositional events. Fine grained and crystal poor (< 10% phenocrysts). Phenocrysts present are primarily sulfides (chalcopyrite and pyrite); oxidized iron-stain rims commonly surround less altered phenocrysts. Phenocrysts are small (< 3 mm) and mostly euhedral. Lapilli (pumice, xenoliths) range in size from less than 3 mm to 5 cm. White (N9) alteration halos present around lapilli typically truncate the liesegang banding. Some small fractures are filled with soft whitish mineral (clay?). Visual secondary fracture porosity approximately 10-15%. This unit produced significant quantities of water when penetrated during drilling.
300			18		
305			11		
310			5		

Depth	Visual %	Lith	Drilling Time Scale: min	Sample Type and Interval	Lithologic Description
310			5		
315			5		
320			4		
325			17		Total Depth = 325'
330					
335					
340					
345					
350					
355					
360					
365					
370					
375	